

THE INSECT PEST SURVEY
BULLETIN

A periodical review of entomological conditions throughout the United States
issued on the first of each month from March to December, inclusive.

Volume 10

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Number 1

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Arkansas	Dr. W. J. Baerg, Agricultural Experiment Station, Fayetteville.
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North Dakota	Prof. J. A. Munro, North Dakota Agricultural College, State College Station, Fargo.
Ohio	Dr. E. W. Mendenhall, Ohio State Department of Agriculture, 97 Brighton Road, Columbus. Dr. J. S. Houser, Agricultural Experiment Station, Wooster. Dr. Herbert Osborn, Ohio State University, Columbus. Dr. R. C. Osborn, Ohio State University, Columbus. Mr. T. H. Parks, Ohio State University, Columbus.
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Haiti	Dr. H. L. Dozier, Head, Department of Entomology, Service Technique, Department of Agriculture, Port-au-Prince.
Hawaii	Mr. O. H. Swezey, Hawaiian Sugar Planters' Association, Honolulu.
Mexico	Dr. A. W. Morrill, Cajeme, Sonora. California address: 815 Hill Street, Los Angeles.

INSECT PEST SURVEY BULLETIN

Vol. 10

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No. 1

OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES

FOR JANUARY AND FEBRUARY, 1930.

In introducing Volume 10 of the Insect Pest Survey Bulletin, we are gratified to announce that the number of States that have organized State surveys to collaborate with the Federal Insect Pest Survey has increased at approximately the rate of one State a year since the Survey finished its inaugural year. We are now associated with active State Surveys in Illinois, Iowa, Minnesota, Mississippi, Montana, North Carolina, Oregon, and Wisconsin, with prospects that several States will organize Surveys during the coming year.

In general throughout the eastern deciduous fruit belt, aphid eggs do not seem to be abnormally abundant, although the apple grain aphid is reported unusually numerous in parts of Missouri.

Mortality of the codling moth in Indiana and Illinois was extremely high, in many places all larvae having been killed. The insect passed the winter more successfully from Missouri southward.

The European red mite was rediscovered in Utah last August after a lapse of five years since it was last observed in that State.

The San Jose scale seems to be slightly on the increase in the Middle Atlantic States. This condition extends throughout the southern part of the East Central States while in the northern part of these States winter mortality has been high. North of St. Louis, in Illinois, only 2 per cent of the scale survived. West of the Mississippi the scale seems to be increasing.

The oriental fruit moth suffered very high mortality in northern Illinois and Indiana, and even in the southern part of these States winter killing of the larvae was severe.

The plum curculio has not yet suffered any severe setback by winter conditions in the Georgia fruit belt. Unusually large numbers went into hibernation throughout the entire eastern part of the United States.

The spiraea aphid is more abundant in Florida this year than it has been for several years. Citrus growth is retarded, so there is prospect of damage from the aphid this spring.

The vegetable weevil has already appeared in the fields in Mississippi, the first larvae having been found in Lawrence County on January 25, where they were reported as doing serious injury to turnips, and during the first half of February much damage to young plants in hot-beds was reported from many points. Similar trouble is being reported from parts of Louisiana.

The turnip aphid was unusually abundant in the Norfolk trucking district of Virginia late in February. Considerable damage by this insect was also reported from near Phoenix, Ariz.

The carrot rust fly has been reported for the second time in Michigan, larvae having been found infesting carrots in storage at Alpena this spring. The only other record for this State was made many years ago at Sault Sainte Marie.

The sugarcane borer suffered very heavy winter mortality in Louisiana.

The cypress bark scale (Ehrhornia cupressi Ehrh.) which was first found attacking Monterey cypress in the vicinity of Covina, Calif., last year, has been found during the winter months at eight additional points in this general district. Infestations are very heavy and individual trees are often killed. This insect is also known from the San Francisco Bay district, where it has been serious for a number of years.

An outbreak of the rat mite developed in a steam laundry in Jackson, Miss.

In Mississippi the Argentine ant continues to be one of the most annoying and injurious insect pests occurring in that State. Recently it has been discovered at Spartanburg, S. Car.

GENERAL FEEDERS

WIREWORMS (Elateridae)

- Florida J. R. Watson (February 18): Wireworms are moderately abundant.
- Mississippi R. W. Harned and assistants (February 22): We have received reports of damage to sweet potatoes from several localities.
- California E. O. Essig (February 24): Wireworms are moderately abundant. They have been reported from many sections this winter.

WHITE GRUBS (Phyllophaga spp.)

- Ohio J. S. Houser (February 16): We expect considerable damage this year.
- Indiana J. J. Davis (February 24): White grubs were abundant in sod in 1927 and beetles were numerous in 1929 in Starke County. The grubs will doubtless be abundant and destructive in northwestern Indiana in 1930.
- Iowa C. J. Drake (February 25): Brood A is due to appear this year.
- Texas F. L. Thomas (February 25): White grubs are moderately abundant at College Station.

JAPANESE BEETLE (Popillia japonica Newm.)

- General U. S. Dept. Agr. Press Release (February 24): The Japanese beetle quarantine regulations have been revised, effective March 1, 1930.

The most important changes are the extension of the regulated area to include one county in Massachusetts as well as certain new territory in Connecticut, New York, Pennsylvania, Maryland, Delaware, and Virginia, and the division of the regulated area into generally and lightly infested areas.

Restrictions on the interstate movement of farm products will apply to the generally infested area but will not affect the movement of farm products from the lightly infested areas. Regulations governing the interstate shipment of nursery and ornamental stock, and of sand, soil, earth, peat, compost, and manure, will apply to shipments from the generally infested area to the lightly infested areas as well as to shipments from either to points entirely outside the regulated areas.

ASIATIC BEETLE (Anomala orientalis Waterh.)
ASIATIC GARDEN BEETLE (Aserica castanea Arrow)

General

U. S. Dept Agr. Press Release (February 21): As a result of the observations of the past year, the Department of Agriculture has reached the conclusion that a continuation of Federal restrictions on the interstate movement of nursery products and soil, to prevent the spread of these insects, is not justified by the information at hand. In placing the quarantine a year ago, the department felt that dissemination should be prevented until the significance of species could be weighed more carefully and further observations made. The past year's work has indicated that their potential danger to the United States does not justify the expenses of quarantine administration and the losses resulting from the imposition of restrictions.

CUTWORMS (Noctuidae)

Florida

J. R. Watson (February 18): Cutworms are moderately abundant.

Mississippi

R. W. Harned and assistants (February 22): A few cutworms have been observed in Monroe and Tate Counties. Agrotis ypsilon Rott. is moderately abundant in the vicinity of Laurel, where it is attacking cabbage, peas, and other garden products.

Hawaii

D. T. Fullaway (1929): The armyworm Spodoptera mauritia Boisd. has been scarce since the introduction of natural enemies, but the true "pokos" (cutworms), which hide in the ground during the day and come forth at night to feed, have been unusually destructive this year on the mauka ranch lands of Hawaii, according to the reports of Mr. A. W. Carter, manager of the Parker Ranch. The worst drought experienced in thirty years was reported at the same time.

O. H. Swezey (1929): Armyworms (Aletia unipuncta Haw. and Spodoptera mauritia Boisd.). There were less than the usual number of outbreaks of armyworms in cane fields this year. Those that came under observation were soon controlled by the several valuable introduced parasites. In one or two instances poisoning was resorted to.

CEREAL AND FORAGE CROP INSECTS

WHEAT.

RUSSIAN FLY (Phytoecia destructor Say)

Ohio

J. S. Houser (February 16): Only in southwestern Ohio is the Russian fly menacing.

Iowa

C. J. Drake (February 25): The Hessian fly has been observed in southern and southeastern Iowa.

Missouri

L. Haseman (February 20): Surveys to date indicate the following infestations:

County	Minimum Per cent	Maximum Per cent
Buchanan	1.4	45.9
Butler.....	0.0	2.0
Gasconade.....	0.0	0.0
Jackson.....	0.0	1.0
Johnson.....	3.3	41.7
Lincoln.....	2.8	93.3
Livingston.....	7.7	100
Maries.....	1.7	66.7
Moniteau.....	1.0	81.8
Oregon.....	0.0	0.0
Osage.....	0.0	0.0
Pike.....	10.0	14.0
Ripley.....	0.0	2.1
Saline.....	10.0	47.0
Scott.....	3.8	5.9
St. Charles.....	1.5	57.7

K. C. Sullivan (February 20): The Hessian fly is moderately abundant in northern Missouri.

Kansas

R. L. Parker (February 22): The Hessian fly is moderately abundant in Fredonia, Wilson, Home, and Marshall Counties, and fields are being plowed under.

CHINCH BUG (Blissus leucooaterus Say)

Florida

J. R. Watson (February 19): The chinch bug was somewhat noticeable on St. Augustine grass during December. Since then it has been less noticeable, as we have been having more cloudy and rainy weather than usual.

Missouri

K. C. Sullivan (February 20): The chinch bug is scattered and scarce.

Kansas

R. L. Parker (February 22): The chinch bug is scarce. The weather has been unfavorable for past two years.

CORN

CORN EAR WORM (Heliothis obsoleta Fab.)

- Florida J. R. Watson (February 18): The corn ear worm is scarce.
- Mississippi L. J. Goodgame (February 22): Adults are moderately abundant in Monroe County.

ALFALFA AND CLOVER

PEA APHID (Illinoia pisi Kalt.)

- Virginia G. E. Gould (February 20): The pea aphid is overwintering on alfalfa, crimson clover, and vetch at Norfolk.
- Arizona O. L. Barnes (February 21): These insects were appearing in considerable numbers in scattered areas in an alfalfa field near Chandler, February 18-19, and also swept from alfalfa in fields located near Tempe and Phoenix. The first half of February was unusually warm, and the aphids seem to be more numerous than last year on this date.

COWPEA APHID (Aphis medicaginis Koch)

- Arizona O. L. Barnes (February 21): Aphis medicaginis has been taken on Melilotus at Chandler, Tempe, and Phoenix. Rather abundant in one field near Tempe, the upper portions of the stems being completely covered by the aphids.

ALFALFA CATERPILLAR (Eurymus eurythame Bdv.)

- Arizona O. L. Barnes (February 21): Several adults observed in an alfalfa field near Phoenix.

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

- Arkansas D. Isely (February 22): Specimens have been received from Marion County. They are reported to be causing damage to alfalfa.

CLOVER HEAD WEEVIL (Tychius picirostris Fabr.)

- Washington Wm. W. Baker (January 4): One specimen swept from clover heads at Puyallup sent to Washington, D. C., was determined by Mr. L. L. Buchanan. Later one specimen was sifted from moss near a patch of sod in which clover is growing.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

Arizona O. L. Barnes (February 21): Adults were taken in small numbers on alfalfa at Chandler, Tempe, and Phoenix, on February 18.

FRUIT INSECTS

APPLE

APHIDS (Aphidae)

New Jersey T. J. Headlee (February 18): Apple aphid eggs are abundant.

Pennsylvania H. E. Hodgkiss (February 20): In general aphid eggs are comparatively few in numbers.

West Virginia L. M. Peairs (February 17): The fruit aphids are moderately abundant in Morgantown and Martinsburg (species not determined).

Virginia P. J. Chapman (February 20): The eggs of fruit aphids are scarce at Norfolk so far this season.

 W. S. Hough (February 20): The fruit aphids are moderately abundant; eggs not nearly so abundant as last winter, in northern Virginia.

Ohio J. S. Houser (February 16): Overwintering eggs scarce this winter.

Missouri L. Haseman (February 24): Eggs of Rhopalosiphum prunifoliae Fitch are very abundant at Columbia; much more abundant than usual.

CODLING MOTH (Carpocapsa pomonella L.)

Indiana J. J. Davis (February 24): The sudden severe cold spell in January produced high winter mortality of many insects. The codling moth had a very high mortality, in some places 100 per cent, where exposed above ground.

Illinois W. P. Flint (February 22): Codling moth larvae, carried in a screened insectary inside a tight wooden container in the insectary and in turn protected by glass containers and by corrugated paper in which the cocoons were spun, showed 50 per cent mortality. In western Illinois Mr. J. H. Bigger reports 81 per cent mortality in codling moth larvae in cages on the trunks of trees. Larvae under bands seem to have suffered less.

S. C. Chandler (February 20): In southern Illinois the codling moth showed 58 per cent winter mortality in cages on trees.

Missouri

L. Haseman (February 24): At Columbia, with a temperature of 16° F., there was 20 per cent mortality, and at Neosho and Marionville, where temperature was as low as 29° F., mortality varied, but was high.

K. C. Sullivan (February 20): The codling moth is moderately abundant.

Kansas

R. L. Parker (February 22): The codling moth is moderately abundant over south-central Kansas. It is also present along the Missouri River in the northeast.

Texas

F. L. Thomas (January 20): Reports from Clyde and Callahan Counties indicate that the fruit territory is heavily infested.

Oregon

D. C. Mote and B. G. Thompson (February 19): Larvae survived the winter beneath bands on apple trees.

California

E. O. Essig (February 24): Hibernating larvae are moderately abundant.

FALL CANKER WORM (Alsophila pometaria Harr.)

New York

W. Moore (February 25): Recently I made an exact count of this insect and found on eight maple trees (one a hard maple and the balance soft maple) from 200 to 835 females per tree, the average number being 474. The size of the tree had little to do with the number, as the greatest number was present on a soft maple very near to the woods, while the smallest number was on a maple standing on the far side of the house from the woods. These numbers are probably smaller than is actually the case, since undoubtedly many of the females have been washed away between November and the present time.

SPRING CANKER WORM (Paleacrita vernata Peck)

Kansas

R. L. Parker (February 22): Emergence of the spring canker worm is just beginning in eastern Kansas.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Virginia

P. J. Chapman (February 20): There were the usual number of egg masses of the eastern tent caterpillar at Norfolk.

LEAF CRUMPLER (Mincola indigenella Zell.)

Texas

F. L. Thomas (February 19): This insect is common in the vicinity of Houston and Beaumont.

LEAFHOPPERS (Cicadellidae)

- Missouri K. C. Sullivan (February 20): Apple leafhoppers are moderately abundant over the State.
- Kansas R. L. Parker (February 22): Apple leafhoppers over the eastern third of Kansas are moderately abundant. Warm weather brought them from hibernation.

EUROPEAN RED MITE (Paratetranychus pilosus Can. & Fanz.)

- New Jersey T. J. Headlee (February 18): The European red mite is moderately abundant.
- Pennsylvania H. E. Hodgkiss (February 20): Infestation by eggs of the red spider is somewhat "spotted," although in the main commercial apple section the eggs are abundant enough to cause considerable comment.
- Utah G. F. Knowlton (February 8): This insect was collected on one rose, in north Logan during the spring of 1924, and determined by Mr. E. E. Ewing. This species has not again been collected in the Logan area since this first record, but Dr. H. J. Pack records it in his notes as occurring on peaches at Magna, August 26, 1929, the adults being abundant.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

- New York C. R. Crosby (February 26): Generally more abundant than for several years.
- Pennsylvania H. E. Hodgkiss (February 20): The San Jose scale in the Cumberland Valley region is rather abundant and appears not to have been killed out by the winter weather, which has been about normal.
- West Virginia L. M. Peairs (February 17): This insect is more abundant than usual.
- Virginia W. S. Hough (February 20): The San Jose scale is moderately abundant in northern Virginia.
- P. J. Chapman (February 20): The San Jose scale is serious in home orchards in Norfolk, on apple and peach.
- Georgia O. I. Snapp (January 15): The average percentage of scale alive on this date was 84.68. The minimum temperature recorded during the winter to date is 18.9° F. Evidently there has been no mortality of the San Jose scale from low temperature in this locality (Fort Valley) to date.
- C. E. Alden (February): The San Jose scale is moderately abundant at Albany, in neglected orchards; also moderately abundant at Thomaston, scarce in Cornelia.

- Florida J. B. Watson (February 18): The San Jose scale is moderately abundant.
- Ohio E. W. Mendenhall (February 19): This insect is quite abundant on apple and pear trees on private properties in Archbold and Fulton Counties.
- Indiana R. F. Sazama (February 12): Counts show a mortality of 32.9 per cent, which is normal for this region. The trees from which the twigs were taken have been very seriously injured by the extremely low temperatures experienced this winter. The lowest temperature recorded was -20° F. Apparently the scale is able to withstand at certain times temperatures fatal to peach trees.
- Illinois W. P. Flint (February 22): Recent examinations of the San Jose scale to note the effect of the extremely cold weather of January on the hibernating scales have shown that in the section of the State north of a line drawn from St. Louis to Centralia less than 2 per cent of the San Jose scale are alive. The percentage of live scales increases gradually from this point on south. In the Ashley-Centralia district from 2 to 4 per cent of the scales are alive according to Mr. Chandler's counts, and 16 per cent of the scales are alive at Carbondale and 40 per cent alive in the extreme southern peach-growing districts. In that section of the State, where less than 2 per cent of the scales have survived, it is doubtful if a dormant scale spray will be necessary.
- Kentucky W. A. Price (February 22): The San Jose scale is moderately abundant over the state.
- Wisconsin E. L. Chambers (February 27): The San Jose scale has evidently come through this much of the winter without serious loss.
- Iowa C. J. Drake (February 25): The San Jose scale is increasing and spreading in southeastern Iowa.
- Missouri K. C. Sullivan (February 20): The San Jose scale is very abundant. A high percentage survived the winter.
- L. Haseman (February 24): Scarce at Columbia; with 16° F. temperature, mortality was about 80 per cent.
- Kansas R. L. Parker (February 22): The San Jose scale is moderately abundant in eastern Kansas, or in the fruit belt. Worst in southeast Kansas.
- Arkansas O. I. Snapp (February 5): The average percentage of scale alive on a number of limbs from a peach orchard at De Queen

was found to be 21.8. The heavy mortality is attributed to low temperatures. A minimum of -5° F. was recorded at one time before the scales were counted, and at several other times the minimum was near the zero mark.

Alabama J. M. Robinson (February 27): The San Jose scale is moderately abundant at Auburn and Talladega.

Mississippi R. W. Harned and assistants (February 22): This insect has been reported as moderately abundant from over most of the State and very abundant from scattered localities.

Arizona O. L. Barnes (February 21): The San Jose scale is scarce; it was observed on rose bushes in Phoenix November 7, 1929.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Ohio E. W. Mendenhall (February 20): The soft maples in North Dayton, planted along the street are badly infested.

Kentucky W. A. Price (February 22): The oyster-shell scale is moderately abundant generally over the State.

Iowa C. J. Drake (February 25): The oyster-shell scale is common.

Missouri K. C. Sullivan (February 20): The oyster-shell scale is scarce in isolated sections.

Wisconsin E. L. Chambers (February 27): The oyster-shell scale has evidently come through this much of the winter without serious loss.

SCURFY SCALE (Chionaspis furfura Fitch)

West Virginia L. M. Peairs (February 17): The scurfy scale is very abundant in Martinsburg in poorly sprayed orchards.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

New York C. R. Crosby (February 26): During the past week of unseasonably warm weather the adults have been found in abundance on the twigs in many parts of the Hudson Valley.

QUINCE

PEAR BORER (Synanthedon pyri Harr.)

Mississippi R. W. Harned (February 24): Specimens of the apple crotch

borer, Aegeria pyri, found on a quince tree were sent to this office from Kossuth in Alcorn County on January 16, 1930. (Det. by J. M. Langston.)

PEACH

PEACH BORER (Aegeria exitiosa Say)

- West Virginia L. M. Peairs (February 17): The peach borer is moderately abundant at Martinsburg where not treated.
- Georgia C. H. Alden (February): The peach borer is moderately abundant at Albany in neglected peach orchards; also moderately abundant in peach orchards at Cornelia and Thomaston.
- Florida J. R. Watson (February 18): The peach borer is moderately abundant.
- Kentucky W. A. Price (February 22): The peach borer is moderately abundant at Lexington, Henderson, and Louisville.
- Iowa C. J. Drake (February 25): The peach borer is abundant on peach trees.
- Mississippi R. W. Harned and assistants (February 22): From reports received from the counties in the south-central part of the State, the peach borer is believed to be very abundant, while reports of moderate abundance are received from the northern counties.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck.)

- West Virginia L. M. Peairs (February 17): The oriental fruit moth is generally and moderately abundant. Twig injury is very general.
- Georgia C. H. Alden (February): The oriental fruit moth is scarce on peach at Albany. It is moderately abundant on peach and scarce in apple orchards at Cornelia.
- Ohio J. S. Houser (February 16): Severe injury to peaches by winter killing may affect the insect this year.
- Indiana J. J. Davis (February 24): The sudden severe cold spell in January not only killed the peach buds and otherwise damaged peach trees but apparently has increased the winter mortality of many insects, especially those exposed. Oriental fruit worms have a very high mortality, in some cases 100 per cent, where they are exposed above the ground.
- Illinois W. P. Flint (February 22): Oriental fruit moth larvae

carried in a screened insectary inside a tight wooden container in the insectary, and in turn protected by glass containers and by corrugated paper in which the cocoons were spun, showed 100 per cent mortality. The official temperature at Urbana was -21° F. At Carbondale, where the temperature was -15° F., there was also a complete kill of the oriental fruit moth.

S. C. Chandler (February 20): In Pulaski County where the minimum temperature was -10° F., at one time during the winter, 72 per cent of the larvae of the oriental fruit moth wintering on the trees were killed. In Jackson County, 50 miles farther north, where the temperature reached -15° F., 89 per cent of those wintering on the trees were killed. In both sections the kill was higher in the branches than on the trunks. Most of the larval parasites found had also been killed. To date no examinations of those hibernating on the ground have been made. Last winter's examinations showed that 40 per cent of all larvae in the orchards winter on the ground. One hundred per cent of the larvae being carried over winter in corrugated cardboard strips in outdoor cages were killed at Carbondale.

Missouri

L. Haseman (February 24): The oriental fruit moths were collected at Cape Girardeau.

Mississippi

O. M. Chance (February 21): The oriental fruit moth is scarce.

N. L. Douglass (February 22): The oriental fruit moth is moderately abundant.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Delaware

L. A. Stearns (February 19): Two broods of the plum curculio developed in southern Delaware during 1929 and the insect went into hibernation in unusually large numbers.

Georgia

O. I. Snapp (February 19): The weather at Fort Valley has not yet been sufficiently cold to bring about mortality of many adult plum curculios in hibernation. The minimum to date is 18.9° F., which, according to hibernation records, is not cold enough to kill many curculios in hibernation.

C. H. Alden (February): No adults have been observed so far at Albany, but there was a heavy infestation in peaches last season. The insect is moderately abundant at Cornelia and Thomaston.

Mississippi

N. L. Douglass (February 22): The plum curculio is very abundant.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Georgia O. I. Snapp (February 27): The first adults of the season were found on peach trees at Fort Valley today.

WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

South Carolina M. H. Brunson (February 25): The white peach scale has done considerable damage to peach trees at Saluda.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

Wisconsin E. L. Chambers (February 27): Some recent observations have revealed the grape leafhopper very abundant and quite active under oak leaves near gooseberry bushes at Madison.

PECAN

AN APHID (Myzocallis fumipennellus Fitch)

Georgia J. B. Gill (February): Heavy infestation of the black pecan aphid (Myzocallis fumipennellus Fitch) is expected to occur in pecan orchards during the coming season. The pest became quite abundant late last summer and caused considerable defoliation in some pecan orchards in the vicinity of Albany.

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Mississippi E. Gladney (February 20): The hickory shuck worm is apparently abundant. We have had an unusually cold winter. The worms apparently survived the cold with a very low or no mortality.

R. P. Colmer (February 22): The hickory shuck worm seems to have survived the winter. There are some live larvae.

PECAN CASE BEARER (Acrobasis juglandis LeB.)

Georgia J. B. Gill (February): Hibernacula of the pecan case bearer are quite abundant on pecan trees in southern Georgia. The insect will likely do considerable damage this spring in pecan orchards which were not properly sprayed or dusted last summer.

Twig Girdler (Oncideres cingulata Say)

South Carolina M. H. Brunson (February 25): Pecan trees throughout the State show considerable damage by the pecan twig girdler.

SUBTROPICAL FRUIT INSECTS

CITRUS

MEDITERRANEAN FRUIT FLY (Ceratitidis capitata Wied.)

Hawaii D. F. Fullaway (1929): Mediterranean fruit flies were scarce in the Kona section of Hawaii this year, according to reports of A. C. Mason and W. W. Yothers.

SPIRAEA APHID (Aphis spiraeicola Patch)

Florida J. R. Watson (February 19): This aphid is more abundant at the present time than for several years past at this season of the year. The growth on citrus trees is behind its development as compared with last year. These two facts together indicate the possibility of some considerable damage the coming spring from this insect.

FLORIDA FLOWER THRIPS (Frankliniella tritici bispinosa Morg.)

Florida J. R. Watson (February 19): The Florida flower thrips is unusually scarce at the present time, undoubtedly owing to the abnormally rainy season.

A BOLLWORM (Heliothis sp.)

Arizona O. L. Barnes (February 21): One larva was taken while feeding on orange, brought from a fruit dealer in Phoenix, October 30, 1929. The larva was gnawing through the peel and had almost reached the pulp when observed.

CALIFORNIA PRIONUS (Prionus californicus Mots.)

Arizona O. L. Barnes (February 21): A few citrus trees were severely girdled by the larvae of a species of Prionus, probably californicus, and appeared to be dying at the time the insects were found, November 25, 1929, near Phoenix.

CITRUS RUST MITE (Eriophyes oleivorus Ashm.)

Mississippi J. P. Kislanko (February 22): The citrus rust mite is scarce.

Florida J. R. Watson (February 18): The citrus rust mite is moderately abundant. Rather numerous for February.

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Georgia C. H. Alden (February): The citrus whitefly is moderately abundant on ornamentals and Satsuma orange in the vicinities of Albany and Cairo.

- Florida J. R. Watson (February 18): The citrus whitefly is moderately abundant.
- Mississippi R. W. Harned and assistants (February 22): This insect appears to be scarce to moderately abundant generally and there are a few reports of great abundance on cape jasmine.
- Louisiana W. E. Hinds, E. E. Smith, and N. Allen (February 22): The citrus whitefly is moderately abundant; citrus was defoliated at Baton Rouge, but white flies were surviving on privets and cape jasmine.

CITRUS RED SPIDER (Paratetranychus citri McG.)

- California Monthly News Letter, Los Angeles County Agricultural Comm. Vol. 12, No. 2, February 15: Red spider conditions in the citrus areas of Los Angeles County are more favorable this February than has been the case for the past four or five years at this season, according to H. H. Wilcomb, Deputy Agricultural Commissioner.
- In the past few years red spider has appeared quite heavy in a large number of orchards by February 15th, but this season the infestations to date are confined to an occasional orchard. A few orchards are quite heavily infested, but the condition in general is quite favorable. Infested orchards are usually represented by those which have been untreated or have been fumigated only.

FLORIDA RED SCALE (Chrysomphalus ficus Ashm.)

- Florida J. R. Watson (February 18): The Florida red scale is moderately abundant.
- Mississippi R. W. Harned and assistants (February 22): Reports indicate that this insect is moderately abundant in south-central Mississippi.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

- Texas F. L. Thomas (February 25): Mr. S. W. Clark reports that the California red scale crawlers emerged in abundance from scales on fruit and leaves in the field January 26, two days after the temperature had dropped as low as 21° F.
- California E. O. Essig (February 24): The California red scale is moderately abundant, which is normal.

BLACK SCALE (Saissetia oleae Bern.)

- California E. O. Essig (February 24): The black scale is moderately abundant, which is normal.

PURPLE SCALE (Lepidosaphes beckii Newm.)

- Georgia C. H. Alden (February): The purple scale is on Satsuma orange trees at Cairo and vicinity.
- Florida J. R. Watson (February 18): The purple scale is moderately abundant.
- Mississippi H. Gladney (February 20): The purple scale is moderately abundant. Citrus has been badly injured by cold, reducing the infestation.
- R. P. Colmer (February 22): The purple scale is moderately abundant. The cold seems to have killed some.

CITRUS MEALYBUG (Pseudococcus citri Risso)

- California E. O. Essig (February 24): This insect is diminishing, being largely replaced in the southern part of the State by Pseudococcus gahanii Green.

PINEAPPLE

A GRASSHOPPER (Conocephalus saltator Saussure)

- Hawaii J. F. Illingworth (1929): The longhorned grasshopper Conocephalus saltator Saussure is normally a predacious species, feeding upon mealybugs and other insects. During the summer, these grasshoppers occurred in tremendous numbers in fields adjoining grass areas. In such locations they fed rather extensively upon the tips of pineapple leaves. A more serious damage, however, was done by the females inserting their eggs into the calyx cavities of flowering fruits. Where the ovipositor punctured the tissue, some decay was initiated.

A BUD MOTH (Pyroderces rileyi Walsingham)

- Hawaii J. F. Illingworth (1929): This insect is troublesome on the fruit. The eggs are laid on the blossoms, and the caterpillars live inside the calyx cavities. They feed upon the remains of the stamens and pistils, gnawing them right down to the point of attachment. In some cases a breaking down of the fruit is caused by organisms of decay entering through the wounds opened up by the caterpillars. The moths are one of the suspected agents causing seedy fruit, since they are constantly crawling in and out of the blossoms.

SAP BEETLES (Nitidulidae)

Hawaii

J. F. Illingworth (1929): Souring beetles are increasingly troublesome in new fields. They are an important agent in the destruction of the pineapple plant in all stages of its growth from the time the plant is put into the ground until it matures. About six exotic species occur in the fields. The most abundant one is Carpophilus humeralis Fab.

AN ANTHOCORID (Triphleps sp.)

Hawaii

J. F. Illingworth (1929): The yellow spot disease of pineapples is a new trouble, starting about 1926. It evidently is a virus disease. So far, I have been unable to determine what insect is the vector. Suspicion, at present, rests on this anthocorid bug. It preys upon plant lice on weeds in the field, and is closely associated with pineapple plants.

A RED SPIDER (Stigmaeus floridanus Banks)

Hawaii

J. F. Illingworth (1929): Red spiders, Stigmaeus floridanus Banks, have been particularly troublesome this year in one of the dry districts. Practically all of the planting material from the tops was ruined by them. They multiplied in tremendous numbers between the imbricated leaves at the base of the plant. It has not been possible to reach them in these situations with insecticides.

QUEENSLAND MITE (Tarsonemus ananas Tryon)

Hawaii

J. F. Illingworth (1929): The Queensland mite is a pest of considerable importance. It occurs in the calyx cavity of the fruit. The damage is done by opening up wounds in the tubules, found in the floor of the cavity. Organisms of decay enter through these, causing a considerable breaking down of the fruit.

A MYCETOPHILID (Sciara molokaiensis Grimshaw)

Hawaii

J. F. Illingworth (1929): Mycetophilid flies are a serious pest in some fields during the winter months. The larvae feed on the new roots of pineapples, hollowing out the tips, and eating laterals.

PINEAPPLE MEALYBUG (Pseudococcus brevipes Cockerell)

Hawaii

J. F. Illingworth (1929): This mealybug sometimes causes a peculiar spotting of pineapple leaves where they have fed. This is due to an infection that the bugs get by first feeding on diseased plants. These spotted or infected plants soon succumb. The trouble is the well-known wilt. Mealybugs that have never fed on wilt plants do not produce these symptoms.

GREENHOUSE CENTIPEDE (Scutigera immaculata Newport)

Hawaii

J. F. Illingworth (1929): These centipedes are particularly troublesome in badly drained areas. Under such conditions they eat off the new roots of pineapples as fast as the plant is able to send them out.

TRUCK - CROP INSECTS

APHIDS (Aphidae)

Florida

J. R. Watson (February 19): Aphids were abundant and destructive to truck crops during December. The cool rainy weather has checked them since.

Mississippi

H. Dietrich (February 22): Aphids on turnips in early December were extremely abundant, so they had to be abandoned.

Alabama

J. M. Robinson (February 27): Plant lice are moderately abundant in winter greens and legumes.

A GRASSHOPPER (Atractomorpha ambigua Bol.)

Hawaii

D. F. Fullaway (1929): Pinkwinged grasshopper (Atractomorpha ambigua Bol.). These garden pests have been very destructive in lowland gardens.

A GRASSHOPPER (Oxya chinensis Thumb.)

Hawaii

D. F. Fullaway (1929): This Chinese grasshopper is a destructive garden pest in lowlands.

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Mississippi

R. W. Harned (February 24): The first specimens of the vegetable weevil received at this office during 1930 were collected as larvae in Lawrence County, on January 25. They were reported as causing serious injury to turnips. Serious injury to tomato plants in hot beds was reported from Terry on February 11, and from Crystal Springs on February 18. At Crystal Springs the correspondent reported that the injury occurred on tomato seedlings, the apical buds being eaten out and young leaves consumed.

J. E. McEvilly (February 20): The vegetable weevil is abundant on turnips in southern Mississippi.

Louisiana

W. E. Hinds, C. E. Smith, and N. Allen (February 22): The vegetable weevil was reported by Norman Allen as attacking spinach and turnips in Plaquemines Parish, with larvae of all sizes present during third week of February.

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Mississippi H. E. Parish (February 21): This pentatonsid has been moderately abundant at Dry Grove, it being observed in the wooded area on warm days.

A MOLE CRICKET (Scapteriscus sp.)

Florida J. R. Watson (February 19): Mole crickets have been rather troublesome during the past winter.

POTATO

POTATO APHID (Illinoia solanifolii Ashm.)

Virginia G. E. Gould (February 20): The potato aphid was found on three plants, endive, spinach, and corn salad. Of the 25 endive plants examined 23 had apterous viviparous females or young, with a maximum of 29 specimens on one plant.

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Florida J. R. Watson (February 18): The Colorado potato beetle is scarce; still dormant.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Iowa C. J. Drake (February 25): The potato leafhopper is common over the entire State.

Kansas R. L. Parker (February 22): The potato leafhopper is moderately abundant. Warm weather brought them from hibernation.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

Indiana J. J. Davis (February 24): Increasing reports of abundance and destructiveness, especially from canners, are being received. The canners of Indiana are diversifying their canning crops, cabbage coming in strong. This partly explains the increasing importance of the cabbage worm.

Iowa C. J. Drake (February 25): The imported cabbage worm was very abundant in 1929 at St. Ansgar and Clear Lake.

CABBAGE APHID (Brevicoryne brassicae L.)

Virginia G. E. Gould (February 20): The cabbage aphid was found on cabbage, collards, and kale at Norfolk.

Arizona O. L. Barnes (February 21): This aphid was abundant on cabbage examined in the Salt/Valley February 6 and 19.
River

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

Alabama J. M. Robinson (February 27): The cabbage maggot is moderately abundant on cabbage stems at Camp Hill.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Virginia P. J. Chapman (February 20): A few specimens were found active in hibernation cages during the warm days. A fair percentage is expected to survive the winter since many live yet quiescent beetles are found in the cages. No beans will be planted in this section before about March 15.

BEAN THRIPS (Heliothrips fasciatus Perg.)

Utah C. F. Knowlton (February 18): The bean thrips was abundant in the bean fields of north Logan during the summer of 1928 and seemed to have some effect on causing blossoms to drop off. It was present but less damaging in the same area during the summer of 1929.

STRAWBERRY

A BUPRESTID (Chrysobothris pubescens Fall)

Washington Wm. W. Baker (December 12 and 30): One field of strawberries at Grand Mound which was examined was apparently infested about 15 or 20 per cent at least and possibly much more as no check was made of runner plants. This pest evidently possesses the ability of becoming a serious hindrance to the production of strawberries.

A CURCULIO (Tyloderma morbillosa Lec.)

Washington Wm. W. Baker (December 12 and 30): This pest is evidently more widespread than we had formerly supposed was the case. Recorded as attacking strawberries at Grand Mound and Rochester.

PEAS

PEA APHID (Illinoia pisi Kalt.)

Florida J. R. Watson (February 19): The pea aphid is showing up around Gainesville. This is nearly two months earlier than we expected to see it.

MELONS

MELON APHID (Aphis gossypii Glov.)

Virginia G. E. Gould (February 20): After examining 150 shepherd's purse plants for the melon aphid, a plant near the greenhouse at Norfolk was found with two apterous viviparous females and a third-instar nymph.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Florida J. R. Watson (February 18): The striped cucumber beetle is very abundant in the Everglades only.

Iowa C. J. Drake (February 25): The striped cucumber beetle is common on cucurbits over the entire State.

Louisiana W. E. Hinds, C. E. Smith, and N. Allen (February 22): The striped cucumber beetle occurs in the truck areas of Baton Rouge and southward. Its occurrence is more irregular than usual, probably owing to winter killing of host plants.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Georgia C. H. Alden (February): The spotted cucumber beetle is scarce on pear and wild plum trees (blooming) at Albany.

Florida J. R. Watson (February 18): The spotted cucumber beetle is moderately abundant; common on cats.

Alabama J. M. Robinson (February 27): The spotted cucumber beetle is moderately abundant on winter legumes at Auburn.

Mississippi W. R. Harned and assistants (February 22): The spotted cucumber beetle is scarce over the State, except in George County, where it is moderately abundant on turnips.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon D. C. Mote (February 19): Diabrotica soror observed on wing.

TOMATO

A LEAF-MINER (Phthorimaea lycopersicella Busck)

Hawaii D. T. Fullaway (1929): The tomato leaf-miner has been very destructive to tomato plants on Molokai, according to the reports of R. M. Duncan, chairman of the Hawaiian Homes Commission.

ENDIVE

AN APHID (Macrosiphum sp.)

Virginia

G. E. Gould (February 20): Males and oviparous females of Macrosiphum sp. were found on lettuce and endive in October and November of both 1928 and 1929.

TURNIPS

TURNIP APHIS (Rhopalosiphum pseudobrassicae Davis)

Virginia

G. E. Gould (February 20): The turnip aphid was found on four plants, including cultivated mustard, turnip, winter cress, and shepherd's purse. About 90 per cent of the mustard plants were infested, with a maximum of 13 on one plant.

Mississippi

J. P. Kislanko (February 22): The turnip aphid was quite abundant in the vicinity of Wiggins late in the fall of 1929, causing heavy loss of turnip greens in small garden plantings where control measures for the aphid were not applied.

Arizona

O. L. Barnes (February 21): Severe damage to turnips was observed February 19 near Phoenix.

KALE

GREEN PEACH APHID (Myzus persicae Sulz.)

Virginia

G. E. Gould (February 20): The spinach (or green peach) aphid, Myzus persicae, was found the most common. Apterous viviparous females and young were found on eight different plants including spinach, kale, endive, water cress, cultivated mustard, corn salad (Valerianella locusta), collards, shepherd's purse, and black mustard. Kale was found to have the heaviest infestation, for all plants examined had some specimens on them and one plant had 34 (including young). A winged male of Myzus persicae was found on Physalis sp. in October 1929. The number of individuals surviving the winter at Norfolk appears to be considerably smaller than last year, due in part, possibly, to a cold winter and several drops in temperature.

Arizona

O. L. Barnes (February 21): This insect was observed on February 19 as moderately abundant on spinach, beets, and turnips near Phoenix.

CARROTS

CARROT RUST FLY (Psila rosae Fab.)

Michigan

R. H. Pettit (February 4): The adults of the carrot rust fly emerged in our cages yesterday. These came from Alpena

where they were working in stored carrots. This is an unusual occurrence, as only once before (many years ago at Sault Ste. Marie) has the carrot rust fly been reported from Michigan.

Washington

Wm. W. Baker (January): So far we have not observed this pest working in carrots which are grown in sandy soils but are very serious in peat and muck soils at Pife and Sumner.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Baker)

California

E. O. Essig (February 24): Reported scarce in hibernating quarters.

A SAWFLY (Sterictiphora lineata Rohw.)

Utah

G. F. Knowlton (1929): This insect was very commonly collected in sugar-beet fields in northern Utah during the summer of 1929.

SWEET POTATO

SWEET-POTATO SPHINX (Herse cingulata Fab.)

Hawaii

D. T. Fullaway (1929): Caterpillars of this moth have been very destructive in Honolulu on account of extensive planting of Kukio vine.

S O U T H E R N F I E L D - C R O P I N S E C T S

TOBACCO

SLUGS (Mollusca)

South Carolina

M. H. Brunson (February 25): Slugs have been reported as damaging stands of young tobacco plants in beds in Williamsburg County.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Florida

J. R. Watson (February 19): A check-up on the cane borer during the harvest time of cane showed that it was unusually scarce over most of the State. Severe infestations were confined to the southwestern counties in regions where damage is always severe. Some fields in the Everglades showed about 1 per cent infestation.

Louisiana W. E. Hinds, C. E. Smith, and N. Allen (February 22): The sugarcane borer population in hibernation was reduced greatly by the unusually severe cold of December and January when the larvae were destroyed in the frozen cane. It looks now as though there will probably be an unusually small first generation of borers.

SUGARCANE WEEVIL (Rhabdocnemis obscura Boisd.)

Hawaii O. H. Swezey (1929): The status of this pest remains about the same from year to year. It is generally well controlled by the New Guinea tachinid in a considerable part of the sugarcane areas, but has done appreciable damage in certain districts where conditions are specially favorable to the borer and unfavorable to the parasite. For a considerable portion of the year Mr. C. E. Pemberton was searching in New Guinea and New Britain Island for additional parasites that might be introduced to Hawaii. No additional ones of value were found.

A MOLE CRICKET (Gryllotalpa africana Beauv.)

Hawaii O. H. Swezey (1929): A few cases were observed where cane planted in low, wet areas suffered injury from the "eyes" being eaten out by mole crickets, also a few of the new shoots eaten off below ground. This insect was known only on Oahu and Kauai, but recently has been found on the island of Maui.

A GRASSHOPPER (Oxya chinensis Thunb.)

Hawaii O. H. Swezey (1929): These grasshoppers have eaten the cane somewhat along edges of fields or grassy roadsides. Its work has been most conspicuous this year on the Island of Hawaii where it was not known till 1925. It has not become widely spread in the sugarcane areas, where in many places the cane leaves at edges of fields are ragged from its ravages. Scarcely any appreciable damage to the cane results, however.

SUGARCANE LEAFHOPPER (Perkinsiella saccharicida Kirk.)

Hawaii O. H. Swezey (1929): No injurious outbreaks of this pest occurred during the year. It is sufficiently controlled by the introduced egg-parasites and the introduced mirid bug Cyrtorhinus mundulus Bredd. which sucks the leafhopper eggs.

THRIPS (Thysanoptera)

Hawaii O. H. Swezey (1929): This year for the first time an occasional specimen of Thrips nanicus Moulton and Chirothrips mexicanus Crawford have been found on cane leaves. They are grass insects and probably were only accidentally on

the cane leaves. Thrips saccharoni Moulton is usually to be found in young cane, occurring in the spindles. It is usually not numerous enough to cause appreciable injury, but sometimes a spotting or local yellowing of the leaves occurs. Another thrips is only occasionally found beneath leafsheaths of cane, Kentronothrips hawaiiensis Moulton.

GRAY SUGARCANE MEALBUG (Trionymus sacchari Ckll.)

Hawaii

O. H. Swezey (1929): This pest continues its usual prevalence. It does no conspicuous injury. It is not controlled by the introduced ladybeetles that feed on other mealybugs.

F O R E S T A N D S H A D E - T R E E I N S E C T S

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Ohio

E. W. Mendenhall (February 20): Egg clusters of the white-marked tussock moth are very abundant in Dayton and vicinity. They were very destructive last summer and promise the same for the coming year.

E. W. Mendenhall (February 21): There are an abundance of nests of the white-marked tussock moth in and about Columbus. They feed on several kinds of shade trees, maple and sycamore especially.

E. W. Mendenhall (January 10): The egg masses of the white-marked tussock moth are very abundant in Dayton on the street and park trees, as poplar, soft maple, elm, etc. The insect was very bad on the trees in Dayton last summer.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Ohio

E. W. Mendenhall (February 25): The larval bags or cocoons of the bagworm are very abundant in the southwestern counties in Ohio. These insects are on shade trees, evergreens and deciduous trees, hanging on the twigs, and it looks as if there would be a big crop of worms this year.

FALL CANKER WORM (Alsophila pometaria Harr.)

Kansas

R. L. Parker (February 22): The fall canker worm is moderately abundant. Just at peak of emergence.

F O R E S T T E N T C A T E R P I L L A R (Malacosoma disstria Huebn.)

Ohio

E. W. Mendenhall (February 19): While it is not reported as a very destructive insect pest, it becomes very numerous and its tents are very conspicuous even this time of the year.

SATIN MOTH (Stilpnotia salicis L.)

Washington Wm. W. Baker (February 25): Although it is too early for the larvae to become active at Tacoma it is quite apparent that a large percentage of larvae have been destroyed in some cases by a fungus or else were attacked by a fungus after death occurred from other causes.

BOXELDER

BOXELDER BUG (Leptocoris trivittatus Say)

Kansas R. L. Parker (February 22): The boxelder bugs are moderately abundant, at Stafford and Havensville House.

Oregon D. C. Mote (February 19): The boxelder bug was observed on the wing by J. Wilcox.

CEDAR

DEODAR WEEVIL (Pissodes deodarae Hopk.)

South Carolina M. H. Brunson (February 25): This insect has been reported as doing considerable damage in Dibble nursery, Orangeburg.

Mississippi R. W. Harned (February 24): Adults were very abundant on Cedrus deodara plants at Meridian, Lauderdale County, during December.

J. E. McEvilly (February 20): The deodor weevil is abundant at McComb on Cedrus deodara.

WHITE-PINE WEEVIL (Pissodes strobi Hopk.)

Mississippi H. Dietrich (February 22): The pissodes weevil was very abundant all winter on Cedrus deodara.

CYPRESS

CYPRESS BARK BEETLE (Ehrhornia cypressi Ehrh.)

California Monthly News Letter, County of Los Angeles, Agricultural Commissioner, Vol. 12, No. 2, (February 15): Eight additional infestations of cypress bark scale, a serious cypress pest, have been found in the Covina-Pomona district as the result of survey work carried on by the Los Angeles County Agricultural Commissioner's office. This scale was first found attacking a Monterey cypress hedge in the vicinity of Covina last December. The hedge had been severely damaged, several of the individual trees having been completely killed.

The recorded activities of this pest in other parts of the State show it to have been severe in the San Francisco Bay region where it has been destructive to hedges and wind-breaks for a number of years. Its native host is believed to be the incense cedar.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schrank)

Oregon D. C. Mote (February 19): The elm leaf beetle was observed on the wing by J. Wilcox February 18.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Wisconsin E. L. Chambers (February 27): European elm scale has come through this much of the winter without serious loss.

ELM SCURFY SCALE (Chionaspis americana Johns.)

Wisconsin E. L. Chambers (February 27): Elm scurfy scale has evidently come through this much of the winter without serious loss.

DOUGLAS FIR

DOUGLAS-FIR CATERPILLAR (Euschausia argentata Pack)

Washington Wm. W. Baker (February): In December it was much more difficult to find colonies than at that time in 1928 but in the latter part of January and during February the colonies have been more easily observed and apparently are more numerous on Douglas fir than a year ago, at Fuyallup and Grand Mound.

JUNIPER

JUNIPER SCALE (Diaspis carueli Targ.)

Ohio E. W. Mendenhall (February 17): Some of the juniper trees in the nurseries at Painesville are quite badly infested with the juniper scale.

OAK

AN OAK WORM (Anisota sp.)

Arizona O. L. Barnes (February 21): Quite a large area of oak was defoliated near Ft. Thomas. Notes and specimens were received from V. T. Mendenhall, Safford, on December 5.

PINE

A MOTH (Ocnerostoma pinariella Zell.)

Washington Wm. W. Baker (February): This pest was first noticed in the adult stage in July of 1929 at Puyallup but no attention was paid to it at that time. Larvae were noticed in November and since that time they have eaten considerably further into the needles of Pinus monticola Douglas.

PINE LEAF SCALE (Chionaspis pinifoliae Fitch)

Ohio E. W. Menderhall (February 25): Find pine leaf scale quite bad on some of the pine evergreens at Painesville, especially mugho pines in Lake County.

Wisconsin E. L. Chambers (February 27): Pine leaf scale has evidently come through this much of the winter without serious loss.

Iowa C. J. Drake (February 25): The pine leaf scale is very common, especially in central and southern Iowa. Many nurserymen are spraying with lime sulphur as a dormant spray this spring to control this pest.

SPRUCE

SPRUCE APHID (Aphis abietina Walk.)

Washington W. W. Baker (February 3 - 8): The appearance of an aphid, likely Aphis abietina Walk. on Colorado blue spruce at Puyallup and Tacoma was perhaps a trifle later this winter owing to the lower temperature during January.

I N S E C T S A T T A C K I N G G R E E N H O U S E

A N D O R N A M E N T A L P L A N T S

RED SPIDER (Tetranychus telarius L.)

Florida J. R. Gatson (February 19): This insect is doing some damage to "ferneries" of Asparagus plumosus.

Indiana J. J. Davis (February 24): Reported February 14 as destructive to house plants at Angola. Recent reports have also been received relative to injury during 1929 to quince at Shelbyville and evergreens at Robert.

Mississippi T. F. McGehee (February 21): Moderately abundant on coniferous evergreen in north-central Mississippi.

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Indiana J. J. Davis (February 24): Reported destructive to greenhouse verbena at Brownstown, January 2.

A FUNGUS GNAT (Sciara sp.)

Indiana J. J. Davis (February 24): Fungus gnat maggots (Sciara sp.) were reported injuring potted plants at Albion, December 16.

JAPANESE ROSE BEETLE (Adoretus sinicus Burm.)

Hawaii D. T. Fulloway (1929): These beetles were very destructive as usual during August and September.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Georgia J. B. Gill (February): Serious outbreaks have occurred at Valdosta and Cairo. Ornamentals, such as Pittosporum, Spiraea, Nandina, and Satsuma orange trees were badly infested.

CITRUS MEALYBUG (Pseudococcus citri Risso)

Kentucky W. A. Price (February 22): Numerous on house plants.

FLORIDA WAX SCALE (Ceroplastes cirripediformis Comst.)

Georgia J. B. Gill (February): Rather heavy infestation of the barnacle scale occurred at Albany on hackberry trees and some ornamental plants.

LONG SOFT SCALE (Coccus elongatus Sign.)

Washington Wm. W. Baker (January 29): The long soft scale has been observed attacking Acacia minula at Tacoma. Although I have made no consistent effort to become acquainted with the scales of greenhouse plants I am quite sure that this is the first infestation that I have observed, in this territory.

CAMELLIA

CHAFF SCALE (Parlatoria pergandii Comst.)

South Carolina M. H. Brunson (February 25): Specimens of Camellia japonica affected with the chaff scale were recently received at the Division of Entomology, Clemson College. No observation was made as to the extent of infestation and damage.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Virginia

P. J. Chapman and G. E. Gould (February 10): The scale has been and continues to be the limiting factor in growing Euonymus, a highly desirable ornamental for Norfolk. A count of 3,000 scales showed that 30 per cent of all present (including both old and new scales) contained live insects. All were full-grown females. No eggs found.

Mississippi

N. L. Douglass (February 22): This scale is reported very abundant in Gunada, Carroll, Tallahatchie, Montgomery, and Yalobusha Counties.

OLEANDER

POLKA-DOT WASP-MOTH (Syntomeida epilais Walk.)

Florida

J. R. Watson (February 19): The polka-dot wasp-moth has been reported doing considerable damage to oleanders during the last month or so.

VIOLETS

GREENHOUSE LEAF TYER (Phlyctaenia ferrugalis Hbn.)

Arizona

O. L. Barnes (February 21): Severe injury to cultivated violets near Phoenix. Adults, larvae, and pupae were observed on December 17.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

RAT MITE (Liponyssus bacoti Hirst).

Mississippi

R. W. Harned (February 24): The tropical rat mite, Liponyssus bacoti Hirst, was received from Jackson on December 14. The mites were collected in a steam laundry by O. M. Chance who reported as follows: "Apparently from one corner of large office, and causing great annoyance to persons as blood suckers. May come from mice." These mites were identified by Dr. H. E. Ewing of the United States Bureau of Entomology.

HOUSEHOLD AND STORED -
PRODUCTS INSECTS

TERMITES (Reticulitermes spp.)

- Indiana J. J. Davis (February 24): Reports of injury to dwelling, store, factory, and library buildings have come to us the past two months from Crawfordsville, Gas City, Logansport, and Tell City.
- Kansas R. L. Parker (February 22): Moderately abundant in Mankato, Olathe, and McPherson, in houses and other buildings.
- Mississippi C. Hines (February 22): Subterranean termites causing considerable damage to buildings in Yazoo City and Canton.
- Wm. L. Gray (February 24): Very abundant at Natchez.
- Nevada G. G. Schewis (February 6): The termites were taken from the interior of a room in the Agricultural Building on the campus of the University of Nevada. They were coming into the room through a small crack in the cement flooring. It is impossible for us to tell you at this time whether the termites were attacking the building or whether any damage has been done; however, if this cement flooring is removed for any purpose in the near future we will look into the matter and if any serious damage has been done will report the same to you. (Det. by T. E. Snyder.)
- Arizona O. L. Barnes (February 21): During November and December, 1929, several complaints were received of damage to floors and rugs in residences in or near Phoenix.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

- South Carolina M. H. Brunson (February 25): The Argentine ant has recently been discovered at Spartanburg. (Det. by Dr. M. R. Smith.)
- Mississippi R. W. Harned (February 25): At the present time probably 1 per cent of the area in Mississippi is infested with the Argentine ant. However, it is doubtful if any other insect causes as much annoyance to people in Mississippi with the possible exception of mosquitoes and house flies. The amount of loss and damage that it causes in the State each year probably exceeds that of any other species with the exception of the boll weevil, boll worm, termites, and possibly a few others.

M. R. Smith (February): The following new infestations have recently been found: Hoffman, Holmes County; Dossville, Leake County; near Jackson, Hinds County. Argentine ants have been observed working outdoors at an air temperature of 40.5° F.

At this temperature the workers were barely moving on a tree, or in other words only covering a distance of 1 foot in 245 seconds. This is the lowest temperature at which we have so far found them active. They are very commonly found working at all temperatures in the fifties, but of course at somewhat slower rates than at higher temperatures.

L. J. Goodgame (February 22): Argentine ants are feeding well now. They are giving considerable trouble in homes in Monroe County.

G. L. Bond (February 22): Argentine ants were found crawling around on concrete walks in Ellisville while the ground was frozen.

M. R. Smith (February 20): An observation made on a colony of Argentine ants nesting in a log at Starksville showed that the ants can stand temperatures as low as 10°F. without suffering any noticeable mortality. Hundreds of specimens found in crevices beneath the loose bark of the log and surrounded by particles of frost quickly revived when brought to a warm room. Observations on a number of Argentine ant colonies at Starksville show that certain birds have been digging into the nest and feeding on the ants at various times during the winter. The exact species of birds feeding on the ants has not yet been learned.

FIRE ANT (Solenopsis geminata Fab.)

Mississippi

Wm. L. Gray (February 24): Fire ants are very abundant in yards and gardens at Natchez.

M. R. Smith (February 20): A number of people in various localities in the state have complained of fire ant workers emerging from crevices around the hearths of their fireplaces and getting into clothing, food, etc. These ants often nest in cracks in the masonry or woodwork of houses, and for that reason infest houses even during the coldest weather in winter.

ANTS (Formicidae)

Mississippi

M. R. Smith (February 20): Mr. Jack Milton has submitted to this office specimens of the so-called honey ant, Prenolepis imparis var. testacea Emery which were giving trouble in a house at Corinth. These native ants are sweet-loving species and could probably be effectively controlled by the use of Argentine ant poison.

Louisiana

M. R. Smith (February 20): Several interesting interceptions of ants in parcel post shipments have been recently made by Plant Board workers. Among them was the interception of one of our common native ants, Pheidole dentata Mayr. in the crowns and roots of balled privet from the Jungle Gardens, Avery Island, to a party living in Kosciusko, Mississippi. The ants



were found by Messrs. D. W. Grimes, H. E. Parish, and F. D. McMillan. Only worker ants were received at this office, but judging from the report received from the men, the nests of the ants must have contained other forms.

- South Carolina M. R. Smith (February 20): Mr. D. W. Grimes intercepted worker ants of the species Prenolepis (Mylanderia) parvula Mayr. in a package from York to a party in this state. Mr. Grimes failed to notify us what plants, if any, he found the ants on.
- Mississippi M. R. Smith (February 20): Mr. W. L. Gray has sent in specimens of the legionary ants, Eciton carolinensis Emery, which were collected in the Argentine ant area at Centerville. This species has only been taken a few times in the state. The legionary ants are noted to feed on the adults and immature stages of other ants, and also on beetles and termites.

EUROPEAN EARWIG (Forficula auricularia L.)

- Oregon D. C. Mote (February 19): Male earwigs have left winter quarters. (Observation of R. Dimick.)

CIGARETTE BEETLE (Lasioderma serricorne Fab.)

- Mississippi Wm. L. Gray (February 24): Cigarette beetles are moderately abundant on furniture at Natchez.

PEA WEEVIL (Mylabris pisorum L.)

- Wisconsin E. L. Chambers (February 27): A considerable number of inquiries regarding the control of pea weevils, have been received.